

## REMARKS

This is intended as a full and complete response to the Office Action dated May 26, 2004, having a shortened statutory period for response set to expire on August 26, 2004. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1-64 remain pending in the application and are shown above. Claims 1-64 are rejected by the Examiner. Reconsideration of the rejected claims is requested for reasons presented below.

Applicants have amended claims 1-3 and 28-30 as to matters of form. Applicants submit that the changes made herein do not introduce new matter.

Claims 55, 57-58, 60-61, and 63-64 stand rejected under 35 U.S.C. § 102(e) as being anticipated by *White, et al.* (U.S. Patent No. 6,286,230). The Examiner asserts that *White, et al.* discloses a first and second chamber (elements 10A and 10B), the first and second chamber each having one or more processing chambers attached thereto (Fig. 1), a load lock (elements 6 and 8) and two or more transition chambers which separate the first and second chamber (elements 28, 30, 32, and 34), the transition chambers each comprising a heating element disposed therein (Fig. 4, step 106). Applicants respectfully traverse the rejection.

*White, et al.* describes a processing system including processing chambers 10A and 10B and load locks 6 and 8. However, *White, et al.* does not show or describe two or more transition chambers which separate first and second chambers, the transition chambers each comprising a heating element disposed therein, as recited in claim 55, or two or more transition chambers within a chamber having one or more processing chambers attached thereto, each transition chamber comprising a heating element disposed therein, as recited in claim 61. Applicants submit that elements 28, 30, 32, and 34 are isolation valves (column 5, lines 28-30), and not transition chambers, as asserted by the Examiner.

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Applicants further submit that *White, et al.* does not teach or suggest a transition chamber comprising a heating element disposed therein. Applicants note that Fig. 4, step 106, which was cited by the Examiner as providing a transition chamber

comprising a heating element disposed therein, describes performing a thermal deposition or other substrate process on a substrate after it has been transferred to process chamber 10A (column 8, lines 20-25). As discussed above, *White, et al.* does not show or describe transition chambers.

Thus, *White, et al.* does not teach, show, or suggest a semiconductor wafer processing system, comprising a first and second chamber, the first and second chambers each having one or more processing chambers attached thereto, a load lock comprising a heating element and attached to the first chamber, and two or more transition chambers which separate the first and second chambers, the transition chambers each comprising a heating element disposed therein, as recited in claim 55. Applicants respectfully request withdrawal of the rejection of claim 55 and of claims 56-60, which depend thereon.

Furthermore, *White, et al.* does not teach, show, or suggest a semiconductor wafer processing system, comprising a chamber having one or more processing chambers attached thereto, a load lock comprising a heating element, the load lock being attached to the chamber, and two or more transition chambers within the chamber, each transition chamber comprising a heating element disposed therein, as recited in claim 61. Applicants respectfully request withdrawal of the rejection of claim 61 and of claims 62-64, which depend thereon.

Applicants further traverse the rejection of dependent claims 57-58, 60, and 63-64. Regarding claims 57-58, 60, and 63-64, the Examiner asserts that *White, et al.* discloses a transition chamber comprising two wafer holders (20A and 20B) and a cooling plate (elements 96 and 98). Applicants note that 20A and 20B in *White, et al.* are substrates shown in end effectors 14 and 18 which load and unload the load locks 6 and 8 via robots (Fig. 1, column 5, lines 22-26). *White, et al.* describes elements 96 and 98 as a cooling platen 96 and cooling assembly 98 (column 5, lines 9-13) in load lock 8. However, *White, et al.* does not show or describe a transition chamber comprising two wafer holders, as recited in claims 57 and 63, a transition chamber comprising a wafer holder, as recited in claim 60, or a transition chamber comprising a cooling plate, as recited in claims 58 and 64. Applicants respectfully request withdrawal of the rejection of claims 57-58, 60, and 63-64.

Regarding claims 56, 59, and 62, the Examiner asserts that *White, et al.* describes a transition chamber heating element comprising a lamp and resistive heater (column 5, lines 5-12). Applicants submit that column 5, lines 5-12 describe a heating assembly in a load lock that allows a substrate to be heated by conductive heating, radiative heating, and forced convection, but does not describe a transition chamber heating element comprising a lamp, as recited in claims 56 and 62, or a transition chamber heating element comprising a resistive heater, as recited in claim 59. Applicants respectfully request withdrawal of the rejection of claims 56, 59, and 62.

Claims 1-54, 56, 59, and 62 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *White, et al.* in view of *Stevens, et al.* (U.S. Patent 6,375,746), on grounds that while *White, et al.* fails to specifically disclose partially preheating the wafer in the load lock and transition chamber, *Stevens, et al.* discloses partially preheating the wafer in the load lock and transition chamber (abstract). The Examiner asserts that it would have been obvious to modify the teachings of *White, et al.* with the teachings of *Stevens, et al.* Applicants respectfully traverse the rejection.

As discussed above, *White, et al.* does not show or suggest an apparatus comprising a transition chamber or partially preheating a wafer in a transition chamber. *Stevens, et al.* describes a wafer processing system that includes a process chamber 13 and a load lock 16A, 16B having the capability to both heat and cool a wafer (abstract, Fig. 2). However, *Stevens, et al.* in combination with *White, et al.* does not show or describe a transition chamber in a wafer processing system. Furthermore, *Stevens, et al.* in combination with *White, et al.* does not teach or suggest partially preheating a wafer in a transition chamber. As neither *White, et al.* nor *Stevens, et al.* describes partially preheating a wafer in a transition chamber, *White, et al.* and *Stevens, et al.*, individually or in combination, do not teach, show, or suggest a method comprising introducing a wafer into a first load lock, partially preheating the wafer in the first load lock, transferring the wafer into a first transition chamber, and partially preheating the wafer in the first transition chamber, as recited in claims 1 and 28. Applicants respectfully request withdrawal of the rejection of claim 1 and of claims 2-27, which depend thereon. Applicants respectfully request withdrawal of the rejection of claim 28 and of claims 29-54, which depend thereon.

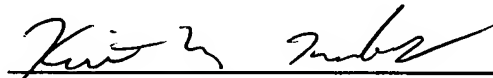
Since *White, et al.* and *Stevens, et al.*, individually or in combination, do not teach or suggest a system comprising two or more transition chambers each comprising a heating element disposed therein, *White, et al.* in view of *Stevens, et al.* does not provide all of the limitations of claim 55, upon which claims 56 and 59 depend. Applicants respectfully request withdrawal of the rejection of claims 56 and 59.

Furthermore, *White, et al.* in view of *Stevens, et al.* does not provide all of the limitations of claim 61, upon which claim 62 depends. Applicants respectfully request withdrawal of the rejection of claim 62.

In conclusion, the references cited by the Examiner, alone or in combination, do not teach, show, or suggest the invention as claimed.

Having addressed all issues set out in the office action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



Keith M. Tackett

Registration No. 32,008

MOSEY, PATTERSON & SHERIDAN, L.L.P.

3040 Post Oak Blvd. Suite 1500

Houston, TX 77056

Telephone: (713) 623-4844

Facsimile: (713) 623-4846

Attorney for Applicant(s)